The Renovator

US Army Corps of Engineers
Baltimore District

Pentagon Renovation Construction Newsletter

Volume 2, Number 1 **January 1995**

Safety top priority

Air sample results meet safety guidelines

. Maintaining a safe environment for tenants during construction is the most important mission of the Corps of Engineers, Baltimore District, Pentagon Renovation Office.

Air quality aggravated

The Corps recognizes that demolition and related construction activities may be aggravating the situation, and is making every effort to ensure tenant health and safety.

The Corps faces a particular challenge in the basement, as original 1942 design and construction did not anticipate office occupancy in that area (it was designed as a storage space for records), and adequate ventilation and space were not planned.

The general deterioration of the facility also has increased the likelihood of dust being created and agitated during the renovation.

Safety program

As part of the Corps' basement renovation safety program, the basement renovation contractor, the subcontractor responsible for asbestos removal, and an independent environmental firm contracted by the Corps are all monitoring air within the contained work area of the basement each day.

Work area results

Results are then reviewed by another environmental consulting firm contracted by the Corps and the Baltimore District's certified industrial hygienist,

(cont'd on pg. 2)

Comments concerning Corps construction

Pentagon tenants and the organizations responsible for the basement renovation face a difficult challenge: performing construction work while tenants remain in the area. While inconveniences are a normal occurrence around any construction area, there may be times that problems or more immediate concerns such as safety hazards may arise.

Questions or comments concerning construction aspects of the renovation can be addressed to:

U.S. Army Corps of Engineers, Baltimore District
Pentagon Renovation Office
100 Boundary Channel Dr.
Arlington, Va. 22202-3712

Phone: (703) 693-8938
FAX: (703) 697-6722

The Pentagon Renovation Office facilities are located in the North Parking Lot.

Air quality

(con't from pg. 1)

Cheryl Mazzella. Air is tested for asbestos fibers, carbon monoxide, hydrogen sulfide, lead, silica, andrespirable dust. Thus far, all results are below federal guidelines.

Tenant concern

While basement work areas have been contained, and air quality within these areas has met health standards, there still has been some concern expressed by basement tenants about air quality in their areas.

Tenants have noticed dust, a black soot-like residue and various odors in the basement area.

The Pentagon Safety and Occupational Health Office has been monitoring air quality in the areas adjacent to renovation activities.

Recent meeting

In order to further discuss the issue of air quality and the Corps' and the Pentagon's Safety Office's air monitoring results, a meeting was recently held with Air Force and Air Force basement tenant representatives.

Attendees included representatives from the Baltimore District's renovation and safety offices and the Corps' contractors, Washington Headquarters Services' Pentagon Renovation and Planning Office, Pentagon Safety and Occupational Health Office, the building manager's office, the Civilian Health Clinic and the Air Force.

The meeting provided tenants with results of air sample and surface sample characterization tests. Michael Cecil, certified industrial hygienist contracted by the Pentagon Safety and Occupational Health Office, summarized the results of the air samples taken by their office during the period Dec. 9, 1994, through Jan. 3, 1995. These air samples determined the concentrations of respirable particulate and lead, zinc, nickel and iron (metals).

In addition, air sampling for 24 volatile organic vapors was conducted on Dec. 30, 1994. All results were compared to applicable Occupational Safety and Health Administration limits.

"The detected airborne contaminant concentrations were well below the OSHA limits as expected," stated Cecil. These results were for both the metals and the vapors.

Respirable dust levels did not exceed OSHA limits, but as Jean Larson, registered nurse, Civilian Health Clinic, explained, "While safety and health standard limits may not be exceeded, the affect on each individual varies, so some people may experience irritation or discomfort, while others are unaffected."

She suggested that employees concerned about their health visit the Civilian Health Clinic.

She also noted that the clinic works closely with the Safety and Occupational Health Office to ensure building related health problems are eliminated.

Suggestions

The building manager received several suggestions to minimize the dust and odors:

- install greater collection efficiency air filters on the heat and ventilation units still operating in the basement,
- more frequent cleaning of the basement area
- replacement of missing ceiling tiles.

Corps initiatives

Mazzella noted that the Corps contractor is "providing ventilation inside the basement work area in order to create negative air pressure to help contain dust particles and vapors."

The Corps' contractor will continue to seal barriers in adjacent occupied areas and conduct dust suppression measures inside the work area.

Air monitoring will continue on a daily basis to ensure no health risks exist. The Corps' highest priority is sustaining a safe working environment throughout the renovation.

Corps officer contacts Pentagon tenants

Lt. Col. Christopher Boruch has been assigned as the Baltimore District's deputy district engineer for the Pentagon Renovation Project.

His duties include assisting with tenant contacts and minimizing disruptions to Pentagon operations caused by ongoing construction.

Lt. Col. Christopher P. Boruch

Tenant comments and concerns regarding renovation activities assist the Corps in minimizing disturbances and inconveniences.

Boruch already has contacted many of the offices affected by the basement renovation and solicited comments and suggestions. He also has responded to tenant inquiries concerning construction activities.

Boruch hopes to facilitate a good working relationship with tenants and keep them abreast of current operations. "If tenants understand why the work needs to be done, and what must be done to complete the work, they can better understand why the short-term inconveniences are needed," explained Boruch.

Boruch's previous assignment was as deputy commander and district engineer for the Corps' Far East District, which is responsible for military construction activities for U.S. forces in the Republic of Korea. He was also the Deputy Chief of the Environmental Restoration Division, Headquarters, U.S. Army Corps of Engineers, Washington, D.C.

Boruch's office is in the Pentagon Renovation Support Complex. He can be contacted at (703) 693-8938, FAX (703) 697-6722.

Services uninterrupted by new H&R plant's construction

Construction continues at the Pentagon Heating and Refrigeration Plant, but most Pentagon tenants are unaware of the activity. That's the way resident engineer Dave Gabel likes it.

"We're managing to construct the new plant while the old plant continues to operate so heating and refrigeration services remain uninterrupted," said Gabel.

However, many of their support systems overlap.

In order to connect those services to the new plant, services from the old plant must be interrupted and arrangements made for temporary replacements.

This requires extensive planning and scheduling among the Pentagon Building Manager's office, Washington Headquarters Services Pentagon Renovation and Planning Office, the Corps of Engineers, Baltimore District, Pentagon Renovation Resident Office, Pentagon Utility Plant and their contractors.

Dates and times must be selected for minimal tenant impact, and allowances must be made for related maintenance, if necessary.

Thus far, thorough planning has allowed work to proceed without causing inconveniences or difficulties for tenants.

When interruption of services, or "outages," are necessary, the outages are usually scheduled for evenings and weekends (particularly long holiday weekends).

The next outage is a chilled water outage planned for President's Day weekend.

During this outage the Corps construction contractor, Bell BCI, will install new piping so that condenser water taken from the Potomac River can be delivered to both the existing and new plants. The capability for simultaneous operation of both plants allows for a smooth transition between systems without impacting tenants.

Pile driving highlights basement activities

The term "pile driving" is used frequently in conjunction with the basement renovation project. But for those unfamiliar with construction, the term may have no real meaning.

What are piles? The piles used for the basement renovation are basically steel pipes approximately a quarter-inch thick, 11 inches in diameter and 45 to 50 feet long. The pipes are filled with concrete for additional structural strength.

Why are piles being used? Piles are needed to support the new floor and any additional loads on existing columns. The new floor is necessary because the original basement floor was constructed as "slab on grade." Slab on grade means that concrete was poured directly onto the grade (or ground). Over the years, the grade experienced some shifting, or settling, which impacted the concrete floor.

"The new basement floor will be supported by the piles, which means even if the ground settles, the floor will not be affected because the entire floor will be structurally supported by the piles," said Mike Stello, Baltimore District geotechnical engineer.

Using a machine called a pile driver, each pile is driven, or "hammered," into the ground in 11 foot sections. Piles are spaced an average of 20 feet apart. Each pile is driven until final resistance is achieved, then filled with concrete. New flooring is then placed on the concrete-filled piles.

While pile driving and the associated operations are noisy, according to Stello, "Pile driving is monitored for excessive sound and vibration." The monitoring is performed to help minimize the impact on Pentagon tenants.

Work has progressed steadily, but pile driving will continue through the basement renovation until the entire basement floor is replaced and existing columns strengthened as necessary.

The Renovator is a publication of the U.S. Army Corps of Engineers, Baltimore District, Pentagon Renovation Office. The U.S. Army Corps of Engineers is the design and construction management agent for Washington Headquarters Services Pentagon Renovation and Planning Office. *The Renovator* is an unofficial publication authorized under the provisions of AR360-81. Material from this publication may be reproduced without permission. Views and opinions expressed are not necessarily those of the Department of Defense or the Department of the Army.

District Engineer.....**Col. Randall R. Inouye**
Deputy District Engineer.....**Lt. Col. Christopher Boruch**
Resident Program Manager.....**John Chubb**
Public Affairs Specialist & Editor.....**Kim Speer**

The Pentagon Renovation Office is located in the North Parking Lot.
Mailing address:
Department of the Army
U.S. Army Corps of Engineers, Baltimore District
Pentagon Renovation Office
100 Boundary Channel Dr.
Arlington, Va. 22202-3712
Phone: (703) 693-8938
FAX: (703) 697-6722